

providing all the pending claims, as they now stand,
incorporating the changes indicated below.

Please cancel claims 1-6 and 8-29.

Rewrite claim 7 as follows:

1 ~~17~~. (Amended) [The method of claim 5] A method of
2 processing and storing data in a computer system including
3 processor circuitry, and a data storage device, the method
4 comprising the steps of:
5 storing first and second sets of records in
6 separate first-in, first-out data structures, respectively,
7 on the data storage device, the first and second sets of
8 records being of different data resolutions and
9 corresponding to overlapping periods of time;
10 operating the processor circuitry to receive data
11 collected over a period of time; and
12 operating the processor circuitry to update at
13 least one record in each of the stored first and second
14 sets of records with the received data such that a previous
15 record included in each of the first and second data
16 structures is replaced;
17 periodically collecting network traffic data, wherein
18 the collected network traffic data includes byte and packet
19 count information associated with each of a plurality of
20 monitored conversations between devices included in the
21 computer system;
22 storing the collected network traffic data in a
23 buffer; and

24 operating the processor circuitry to retrieve network
25 traffic data from the buffer, the retrieved network traffic
26 data being received by the processor circuitry;

27 [,] wherein the step of operating the processor
28 circuitry to update at least one record in each of the
29 stored first and second sets of records [including]
30 includes the steps of:

31 updating a record corresponding to a first
32 conversation in the first set of records; and

33 updating a record corresponding to the first
34 conversation in the second set of records. --.

Please add the following new claims:

1 ~~30.~~ The method of claim ~~7~~, further comprising the
2 step of:

3 allocating fixed amounts of storage space on the
4 data storage device for storing each one of the first and
5 second first-in, first-out data structures used to store
6 the first and second sets of records.

1 ~~31.~~ The method of claim ~~7~~, wherein the first set of
2 records include hourly records and the second set of
3 records includes daily records.

1 ~~32.~~ The method of claim ~~7~~,
2 wherein the network traffic data stored in the
3 buffer includes time stamp information indicating the
4 period of time in which the network traffic data was
5 collected; and

6 wherein the step of operating the processor
7 circuitry to update at least one record in each of the
8 stored first and second sets of records includes the step
9 of:

10 examining at least one time stamp included in the
11 buffered network traffic data.

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1 ~~33.~~ The method of claim ~~1~~,

2 wherein the processor circuitry includes first
3 and second central processing units, and

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4 wherein the step of operating the processor
5 circuitry to update at least one record in each of the
6 stored first and second sets of records includes the step
7 of operating the first processor to update the first set of
8 records while operating the second processor to update the
9 second set of records.

6
1 ~~34.~~ The method of claim ~~1~~, wherein the computer system
2 further includes a display device, the method further
3 comprising the step of:

4 displaying data corresponding to overlapping
5 periods of time at different resolutions on the display
6 device.

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1 ~~35.~~ A computer system for monitoring network traffic data
2 comprising:

3 a memory;
4 a data storage device; and
5 a processor to execute instructions stored in the
6 memory,

7 wherein the memory stores:

8 instructions to store first and second sets
9 of records in separate first-in, first-out data structures,
10 respectively, on the data storage device, the first and
11 second sets of records being of different data resolutions
12 and corresponding to overlapping periods of time;

13 instructions to receive data collected over
14 a period of time;

15 instructions to update at least one record
16 in each of the stored first and second sets of records with
17 the received data such that a previous record included in
18 each of the first and second data structures is replaced;

19 instructions to periodically collect network
20 traffic data, wherein the collected network traffic data
21 includes byte and packet count information associated with
22 each of a plurality of monitored conversations between
23 devices included in the computer system;

24 instructions to store the collected network
25 traffic data in a buffer; and

26 instructions to retrieve network traffic
27 data from the buffer, the retrieved network traffic data
28 being received by the processor;

29 wherein the instructions to update at least one record
30 in each of the stored first and second sets of records
31 include instructions to:

32 update a record corresponding to a first
33 conversation in the first set of records; and

34 update a record corresponding to the first
35 conversation in the second set of records.

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36. The computer system of claim 35, wherein the memory
2 further comprises instructions to:

3 allocate fixed amounts of storage space on the
4 data storage device for storing each one of the first and
5 second first-in, first-out data structures used to store
6 the first and second sets of records.

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37. The computer system of claim 35, wherein the first set
of records include hourly records and the second set of
records includes daily records.

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38. The computer system of claim 35,
wherein the network traffic data stored in the
buffer includes time stamp information indicating the
period of time in which the network traffic data was
collected; and

wherein the instructions to update at least one
record in each of the stored first and second sets of
records include instructions to:

examine at least one time stamp included in the
buffered network traffic data.

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39. The computer system of claim 35,

wherein the processor includes first and second
central processing units, and

wherein the instructions to operate the processor
to update at least one record in each of the stored first
and second sets of records includes instructions to operate
the first processor to update the first set of records
while operating the second processor to update the second
set of records.

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1 ~~40.~~ The computer system of claim ~~35~~ further including a
2 display device, the memory further comprising instructions
3 to:
4 display data corresponding to overlapping periods
5 of time at different resolutions on the display device.

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1 ~~41.~~ A computer program product system for monitoring
2 network traffic data, said computer program product
3 comprising a computer usable medium having computer
4 readable program code means embodied in said medium for
5 causing a processor in a computer to:
6 store first and second sets of records in separate
7 first-in, first-out data structures, respectively, on a
8 data storage device, the first and second sets of records
9 being of different data resolutions and corresponding to
10 overlapping periods of time;
11 receive data collected over a period of time;
12 update at least one record in each of the stored first
13 and second sets of records with the received data such that
14 a previous record included in each of the first and second
15 data structures is replaced;
16 periodically collect network traffic data, wherein the
17 collected network traffic data includes byte and packet
18 count information associated with each of a plurality of
19 monitored conversations between devices included in the
20 computer system;
21 store the collected network traffic data in a buffer;
22 and
23 retrieve network traffic data from the buffer, the
24 retrieved network traffic data being received by the
25 processor;

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1 wherein the causing the processor to update at least
2 one record in each of the stored first and second sets of
3 records includes:

4 updating a record corresponding to a first
5 conversation in the first set of records; and

6 updating a record corresponding to the first
7 conversation in the second set of records.

1 ¹⁴~~42~~. The computer program product of claim ¹³~~41~~, wherein the
2 computer readable program code means further causes the
3 processor to:

4 allocate fixed amounts of storage space on the
5 data storage device for storing each one of the first and
6 second first-in, first-out data structures used to store
7 the first and second sets of records.

1 ¹⁵~~43~~. The computer program product of claim ¹³~~41~~, wherein the
2 first set of records include hourly records and the second
3 set of records includes daily records.

1 ¹⁶~~44~~. The computer program product of claim ¹³~~41~~,

2 wherein the network traffic data stored in the
3 buffer includes time stamp information indicating the
4 period of time in which the network traffic data was
5 collected; and

6 wherein the computer readable program code means
7 to update at least one record in each of the stored first
8 and second sets of records includes computer readable
9 program code means to examine at least one time stamp
10 included in the buffered network traffic data.